

# FIGURE 1

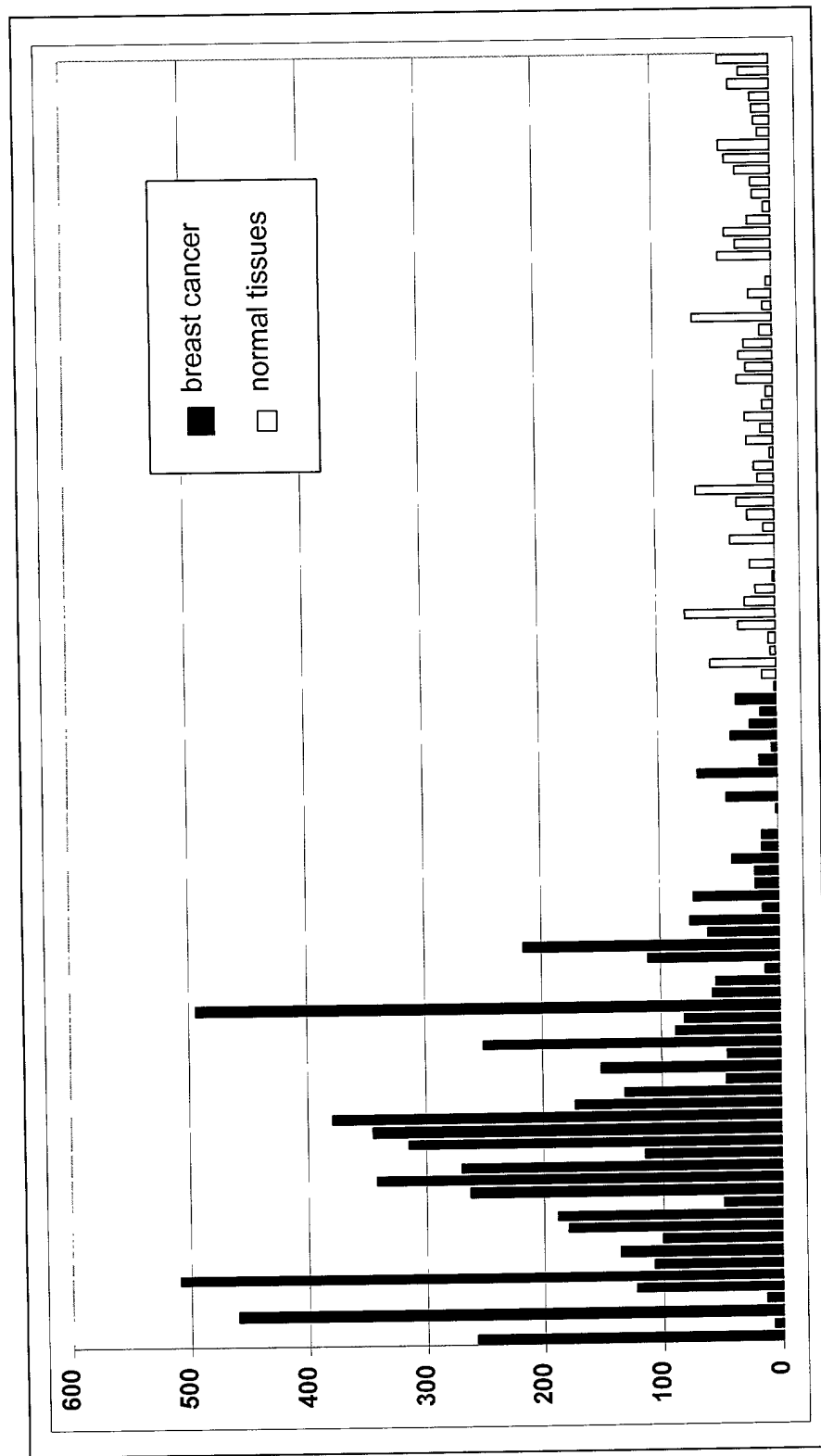
GGCGTCCGCGCACACCTCCCCGCGCCGCGCCGCCACCGCCCGCACTCCGCGCGCTCTGCCCGCAACCGCT  
GAGCCATCCATGGGGGTGCGGGGCCGCAACCGTCCCGGGGCGGCCTGGGCGGTGCTGCTGCTGCTGCTGCT  
GCTGCCGCACTGCTGCTGCTGGCGGGGGCCGTCCCGCCGGGTGCGGGGCCGTGCCGCGGGGCCGAGGAGG  
ATGTAGATGAGTGTGCCCCAAGGGCTAGATGACTGCCATGCCGACGCCCTGTGTGAGAACACACCCACCTCC  
TACAAGTGCTCCTGCAAGCCTGGCTACCAAGGGGAAGGCAGGCAGTGTGAGGACATCGATGAATGTGGAAA  
TGAGCTCAATGGAGGCTGTGTCCATGACTGTTTGAATATTTCCAGGCAATTATCGTTGCACTTGTTTTGATG  
GCTTCATGTTGGCTCATGACGGTCATAATTGTCTTGATGTGGACGAGTGCCTGGAGAACAATGGCGGCTGC  
CAGCATACCTGTGTCAACGTCATGGGGAGCTATGAGTGTGCTGCAAGGAGGGGTTTTTCTGAGTGACAA  
TCAGCACACCTGCATTACCCGCTCGGAAGAGGGCCTGAGCTGCATGAATAAGGATCACGGCTGTAGTCACA  
TCTGCAAGGAGGCCCCAAGGGGCAGCGTCGCCTGTGAGTGCAGGCCTGGTTTTGAGCTGGCCAAGAACCAG  
AGAGACTGCATCTTGACCTGTAAACCATGGGAACGGTGGGTGCCAGCACTCCTGTGACGATACAGCCGATGG  
CCCAGAGTGCAGCTGCCATCCACAGTACAAGATGCACACAGATGGGAGGAGCTGCCTTGAGCGAGAGGACA  
CTGTCTGGAGGTGACAGAGAGCAACACCACATCAGTGGTGGATGGGGATAAACGGGTGAAACGGCGGCTG  
CTCATGGAAACGTGTGCTGTCAACAATGGAGGCTGTGACCGCACCTGTAAGGATACTTCGACAGGTGTCCA  
CTGCAGTTGTCTGTGGATTCACTCTCCAGTTGGATGGGAAGACATGTAAAGATATTGATGAGTGCCAGA  
CCCGCAATGGAGGTTGTGATCATTTCTGCAAAAACATCGTGGGCAGTTTTGACTGCGGCTGCAAGAAAGGA  
TTTAAATTATTAACAGATGAGAAGTCTTGCCAAGATGTGGATGAGTGTCTTTGGATAGGACCTGTGACCA  
CAGCTGCATCAACCACCTGGCACATTTGCTTGTGCTTGCAACCGAGGGTACACCCTGTATGGCTTCACCC  
ACTGTGGAGACACCAATGAGTGCAGCATCAACAACGGAGGCTGTGAGCAGGTCTGTGTGAACACAGTGGGC  
AGCTATGAATGCCAGTGCCACCTGGGTACAAGCTCCACTGGAATAAAAAAGACTGTGTGGAAGTGAAGGG  
GCTCCTGCCCACAAGTGTGTACCCCGTGTGTCCCTGCACTGCGGTAAAGAGTGGTGGAGGAGACGGGTGCT  
TCCTCAGATGTCACTCTGGCATTACCTCTCTCAGATGTCAACCACCATCAGGACAAGTGAACCTTTAAG  
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GAAGCACAGCTCAGTAAAAGAGAGCTTCCGCTACGTAACCTTACATGCAGCTCTGGCAAGCAAGTCCCAG  
GAGCCCCTGGCCGACCAAGCACCCCTAAGGAAATGTTTATCACTGTTGAGTTTGAGCTTGAACTAACC  
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CCGCACGCTCAGAAAGGCCGTCCACAGGGAGCAGTTTACCTCCAGCTCTCAGGCATGAACCTCGACGTGG  
CTAAAAAGCCTCCGAGACATCTGAACGCCAGGCAGAGTCTGTGGAGTGGGCCAGGGTCATGCAGAAAAC  
CAATGTGTGAGTTGCAGGGCTGGGACCTATTATGATGGAGCACGAGAACGCTGCATTTTATGTCCAAATGG  
AACCTTCCAAAATGAGGAAGGACAAATGACTTGTGAACCATGCCCCAAGACCAGGAAATTCTGGGGCCCTGA  
AGACCCAGAAGCTTGGAATATGTCTGAATGTGGAGGTCTGTGTCAACCTGGTGAATATTCTGCAGATGGC  
TTTGCACCTTGCCAGCTCTGTGCCCTGGGCACGTTCCAGCCTGAAGCTGGTGAACCTTCTGCTTCCCCTG  
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CACCTGGACATTTCTACAACACCACCACTCACCGATGTATTTCGTTGCCAGTGGGAACATACCAGCCTGAA  
TTTGGAAAAATAATTGTGTTTCTTGCCAGGAAATACTACGACTGACTTTGATGGCTCCACAAACATAAC  
CCAGTGTAATAAACAGAGATGTGGAGGGGAGCTGGGAGATTTCACTGGGTACATTGAATCCCCAACTACC  
CAGGCAATTACCCAGCCAACACCGAGTGTACGTGGACCATCAACCCACCCCCAAGCGCCGCATCCTGATC  
GTGGTCCCTGAGATCTTCTGCCATAGAGGACGACTGTGGGACTATCTGGTGATGCGGAAAACCTCTTC  
ATCCAATTCTGTGACAACATATGAAACCTGCCAGACCTACGAACGCCCCATCGCCTTACCTCCAGGTCAA  
AGAAGCTGTGGATTCAAGTCCAATGAAGGGAACAGCGCTAGAGGGTCCAGGTCCCATACGTGACA  
TATGATGAGGACTACCAGGAACCTATTGAAGACATAGTTTCGAGATGGCAGGCTCTATGCATCTGAGAACCA  
TCAGGAAATACTTAAGGATAAGAACTTATCAAGGCTCTGTTTGATGTCTTGCCCCATCCCCAGAACTATT  
TCAAGTACACAGCTTGGAGTCCCGAGAGATGTTTCCAAGATCGTTTATCCGATTGCTACGTTCCAAAGTG  
TCCAGGTTTTTGGACCTTACAAATGACTCAGCCACGTCCTCAATACAAATGTTCTGCTATAGGGTT  
GGTGGGACAGAGCTGTCTTCTTCTGCATGTGAGCAGTCCGGTATGCTGCGCTCCCGTATCAGTGACTC  
ATTAGAGTTCAATTTTTATAGATAATACAGATATTTTGGTAAATGAACTTGGTTTTTCTTCCCAGCATC  
GTGGATGTAGACTGAGAATGGCTTTGAGTGGCATCAGCTTCTCACTGCTGTGGGCGGATGTCTTGGATAGA  
TCACGGGCTGGCTGAGCTGGACTTTGGTCAGCCTAGGTGAGACTCACCTGTCTTCTGGGGTCTTACTCCT  
CCTCAAGGAGTCTGTAGTGGAAGGAGGCCACAGAATAAGCTGCTTATTCTGAACTTCAGCTTCTCTAG  
CCCGGCCCTCTCAAGGGAGCCCTCTGCACTCGTGTGCAGGCTCTGACCAGGCAGAACAGGCAAGAGGGGA  
GGGAAGGAGACCCCTGCAGGCTCCCTCCACCCACCTTGAGACCTGGGAGGACTCAGTTTCTCCACAGCCTT  
CTCCAGCCTGTGTGATACAAGTTTGATCCCAGGAACCTGAGTTCTAAGCAGTGCTCGTGAAAAAAAAGC  
AGAAAGAATTAGAAATAAATAAAAACTAAGCACTTCTGGAGACAT

# FIGURE 2

MGVAGRNRPGAAWAVLLLLLLLPPLLLLAVPPGRGRAAGPQEDVDECAQGLDDCHADALCQNTPTS YKC  
SCKPGYQGEGRQCEDIDECGNELNGGCVHDCLNIPGNYRCTCFDGFMLAHDGHNCLDVDECLENNGGCQHT  
CVNVMGSYECCCKEGFFLSDNQHTCIHRSEGLSCMNKDHGCSHICKEAPRGSVACECRPGFELAKNQ RDC  
ILTCNHGNGGCQHSCDDTADGPECSCHPQYKMHTDGRSCLEREDTVLEVTESENTTSVVDGDKRVKRRLME  
TCAVNNGGCDRTCKDTSTGVHCSCPVGFTLQLDGKTCCKDIDECQTRNGGCDHFCKNIVGSFDCGCKKGFKL  
LTDEKSCQDVDECSLDRTCDHSCINHPGTFACACNRGYTLYGFTHCGDTNECSINNGGCQQVCVNTVGSYE  
CQCHPGYKLHWNKKDCVEVKGLLPTSVSPRVSLHCGKSGGGDGCFLRCHSGIHLSSDVTITRTSVTFKLNE  
GKCSLKNAELFPEGLRPALPEKHSSVKESFRYVNLTCSSGKQVPGAPGRPSTPKEMFITVEFELETNQKEV  
TASCDLSCIVKRTEKRLRKAIRTLRKAVHREQFHLQLSGMNLDVAKKPRTSERQAESCGVGQGHAE NQCV  
SCRAGTYD GARERCILCPNGTFQNEEGQMTCEPCPRPGNSGALKTPEAWNMSECGGLCQPGEYSADGFAP  
CQLCALGTFQPEAGRTSCFPCGGGLATKHQGATSFDCETRVQCS PGHFYNTTTTHRCIRC PVGTYQPEFGK  
NNCVSCPGNTTTDFDGSTNITQCKNRRCGGELGDFTYIESPNYPGNYPANTECTWTINPPPKRRILIVP  
EIFLPIEDDCGDYLVMRKTSSNSVTTYETCQTYERPIAFTSRSKKLWIQFKSNEGNSARGFQVPYV TYDE  
DYQELIEDIVRDGRLYASENHQEILKDKKLIKALFDVLAHPQNYFKYTAQESREMFPRSFIRLLRSKVS RF  
LRPYK

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FIGURE 3



# FIGURE 4A

BCO2_human	MGVAGRNRPGAAWAVLLLLLLLLPPLLLLLAGAVPPGRGRAAGPQEDVDECAQGLDDCHADA
BCO2_mouse	MGVAGCGRPREARALLLLLLLLLP--LLAAAVPPDRGLTNGPSEDVDECAQGLDDCHADA ***** . ** * *:***** ***,****.*: ** ,*****
BCO2_human	LCQNTPTSYKCSCKPGYQGEGRQCEDIDECNGLNGGCVHDCLNIPGNYRCTCFDGFMLA
BCO2_mouse	LCQNTPTSYKCSCKPGYQGEGRQCEDMDECNTLNGGCVHDCLNIPGNYRCTCFDGFMLA *****:*****.*:*****
BCO2_human	HDGHNCLDVDECLENNNGGCQHTCVNVMGSYECCKEGFFLSDNQHTCIHRSEEGLSMKNK
BCO2_mouse	HDGHNCLDMDECLENNNGGCQHICTNVIGSYECRCKEGFFLSDNQHTCIHRSEEGLSMKNK *****:*****.*:*****
BCO2_human	DHGCSHICKEAPRGSVACECRPGFELAKNQDRCILTCNHGNGGCQHS CDDTADGPECSCH
BCO2_mouse	DHGCGHICKEAPRGSVACECRPGFELAKNQKDCILTCNHGNGGCQHS CEDTAEGPECSCH **** ,*****:*****:*****:****:*****
BCO2_human	PQYKMHTDGRSCLEREDTVLEVTESNTTSVVDGDKRVKRRLLMETCAVNNGGCDRTCKDT
BCO2_mouse	PRYRLHADGRSCLQEGTVLEGTESNATSVADGDKRVKRRLLMETCAVNNGGCDRTCKDT *:*:*:*****:*.**** ***:*** ,*****
BCO2_human	STGVHCSCPVGFTLQLDGKTKDIDECQTRNGGCDHFCKNIVGSFDCGCKKGFKLLTDEK
BCO2_mouse	STGVHCSCPVTGFTLQVDGKTKDIDECQTRNGGCNHFCKNTVGSFDCSCKKGFKLLTDEK ***** ,*****:*****:*****:***** ***** ,*****
BCO2_human	SCQDVDECLDRTCDHSCINHPGTACACNRGYTLYGFTHC GDTNECSINNGGCQQVCVN
BCO2_mouse	SCQDVDECLERTCDHSCINHPGTACACNPGYTLYSFTHCGDTNECSVNNGGCQQVCIN *****:***** ***** ***** ,*****:*****:*
BCO2_human	TVGSYECQCHPGYKLHWNKKDCVEVKGLLPTSVSPRVLHCGKSGGGDGCFLRCHSGIHL
BCO2_mouse	TVGSYECQCHPGFKLHWNKKDCVEVKGFPTSMTPRVLHCGKSGGGDRCF LRCSGIHL *****:*****:*****:*****:***** *****:*****
BCO2_human	SSDVTIRTSTVTFKLNEGKCSLKNAELFPEGLRPALPEKHSSVKESFRYVNLTCSSGKQV
BCO2_mouse	SSDVVTVRTSVTFKLNEGKCSLQKALSP EGLRPALPERHSSVKESFQYANLTCSPGKQV **** ,*:*****:*****:*****:*****:*****:*****:*****
BCO2_human	PGAPGRPSTPKEMFITVEFELETNQKEVTASCDLSCIVKRTEKRLRKAIRTLRKAVHREQ
BCO2_mouse	PGALGRLNAPKEMFITVEFERETYEKEVTASCNLSCVVKRTEKRLRKAIRTLKRAAHREQ *** ** ,*:***** ** ,*****:***:*****:*****:****:*
BCO2_human	FHLQLSGMNLDAKKPPRTSERQAESCGVGQGHAEQCVSCRAGTYD GARERCILCPNG
BCO2_mouse	FHLQLSGMDLDMAKTPSRVSGQHEETCGVGQGH EESQCVSCRAGTYDGSQERCILCPNG *****:***:***.*.*:*:***** *.*****:*****
BCO2_human	TFQNEEGQMTCEPCPRPGNSGALKTP EAWNMSECGGLCQPGEYSADGFAPCQLCALGT FQ
BCO2_mouse	TFQNEEGQVTCEPCPRPENLGS LKISEAWNVS DCGGLCQPGEYSANGFAPCQLCALGT FQ *****:***** * *:*** ,**** ,*:*****:*****:*****
BCO2_human	PEAGRTSCFPCGGGLATKHQGATSFQDCETRVQCSPGHFYNTTTHRCIRCPVGT YQPEFG
BCO2_mouse	PDVGRTSCLSCGGGLPTKHLGATSFQDCETRVQCSPGHFYNTTTHRCIRCP LGTYQPEFG * ,*****:*****.* ***,*****:*****:*****:*****
BCO2_human	KNNCVSCPGNTTTDFDGSTNITQCKNRRCGGELGDF TGYIESPNYPGNYPANTECTWTIN
BCO2_mouse	KNNCVSCPGNTTTDFDGSTNITQCKNRKCGGELGDF TGYIESPNYPGNYPANSECTWTIN *****:*****:*****:*****:*****:*****
BCO2_human	PPPKRRILIVVPEIFLPIEDDCGDYLV MRKTS SSVTTYETCQTYERPIAFTSRSKKLW
BCO2_mouse	PPPKRRILIVVPEIFLPIEDDCGDYLV MRKTS SSVTTYETCQTYERPIAFTSRSKKLW *****

BCO2\_human IQFKSNEGNSARGFQVPYVITYDEYQELIEDIVRDGRLYASENHQEILKDKKLIKALFDV  
BCO2\_mouse IQFKSNEGNSARGFQVPYVITYDEYQELIEDIVRDGRLYASENHQEILKDKKLIKALFDV  
\*\*\*\*\*  
  
BCO2\_human LAHPQNYFKYTAQESREMFPFSFIRLLRSKVSRLRPYK  
BCO2\_mouse LAHPQNYFKYTAQESREMFPFSFIRLLRSKVSRLRPYK  
\*\*\*\*\*

## FIGURE 4B

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